Self-Destructive Behavior in Physically Abused Schizophrenic Children

Report of Cases

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In a previous investigation of self-mutilation, this author described the frequent occurrence of self-mutilation in a group of school-age schizophrenic children at a residential treatment center.[1] The self-mutilation was shown to have a significant relationship to prior infantile headbanging which was regarded as a precursor. In cases where self-mutilation occurred with no prior history of infantile headbanging, it was observed that many of the children had been subjected to severe physical punishment at the hands of one or both parents during the first years of life. This physical abuse often persisted up to the child's admission to the center. It was hypothesized that the repeated painful stimulation during the physical abuse could have a traumatic effect on the developing ego similar to the self-inflicted painful stimulation of headbanging, leading to the development of self-mutilation. The importance of parental reinforcement in encouraging the child to perpetuate these painful experiences was also considered. The main purpose of this paper, therefore, will be to test this hypothesis by ascertaining whether or not the occurrence of self-mutilation in the entire group bears a significant relationship to a prior history of physical abuse. In addition, information will be sought concerning the pathogenesis of abuse among schizophrenic children and the nature of its link with self-destructive behavior which might be applicable to the child abuse encountered in the general population. Careful exploration of the dynamics in each case of abuse will facilitate this investigation.

Although there have been numerous investigations concerning the influence of

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physical punishment on subsequent childhood attitudes and behavior, only Sears[2] linked the administration of physical punishment to the later development of self-destructive behavior. He reported preoccupation with self-punishment, accident proneness, and suicidal tendencies in a group of 12-year-old boys who had been punitively handled during toilet training while their external expression of aggressive behavior was restricted. The occurrence of more extreme forms of physical punishment has been reported under the headings of "child abuse" and the "battered child syndrome."[3-7] This literature deals primarily with the epidemiology, medical detection, and legal implications of the problem, emphasizing protection of these children from the assaultive adults. Fewer such reports have dealt with the psychological aspects of child abuse. These have been mainly concerned with the psychopathology of the abusive parents.[8-10] The few recent investigations dealing with the psychological impact of such extreme physical punishment on these children have not explored its relationship to self-destructive behavior.[11-12] Possible precursors to self-destructive behavior have been suggested in the literature dealing with attempted suicide in children and adolescents.[13-16] However, these investigations have stressed the importance of general parental hostility and rejection rather than the use of physical punishment in the facilitation of suicidal behavior.

Design of Study

The 70 school-age schizophrenic children (52 boys and 18 girls) who were formerly used as subjects in the previous investigation of self-mutilation at the Henry Ittleson Center for Child Research were carefully screened for the presence of physical abuse at the hands of their parents. Whereas most of these children had been discharged from the center at the inception of this study, the information regarding their abuse was well documented in the detailed case histories and treatment records of the children and their families. For purposes of this study, physical abuse is defined as the sustained use of physical punishment as the major mode of controlling the behavior of the child. It includes recurrent severe beatings administered by one or both parents which started in early infancy or within the first two years of life.

The somewhat arbitrary nature of this definition is taken into account owing to the difficulty in quantitatively differentiating so-called "abuse" from the amount and intensity of physical punishment commonly acceptable as a disciplinary tool in our culture. The definition of "physical abuse" used here implies a greater severity, an increased frequency, and earlier onset of physical punishment than is normally observed. At the same time, it is less severe than the abuse comprising the "battered child syndrome" which results in skull injuries and the fracture of long bones.

Self-mutilation is defined as an overtly painful or destructive act committed by the child on his own body. Symbolic or ill-defined indicators of self-mutilation, such as destruction of one's clothing, expressions of self-mutilation in play and fantasy, masochistic provocativeness, and accident proneness were not included. The observations of self-mutilative behavior were made by one or several members of the professional staff: psychiatrists, psychologists, social workers, child-care workers, and teachers.

The children were divided into two groups according to the presence or absence of previous physical abuse; there were in turn subdivided into a boys and girls group. The "abused" and "non-abused" groups were then compared with one another as to the presence of self-mutilation which had been previously determined.

Results

The incidence of physical abuse in the schizophrenic children at the Ittleson Center is noted in Table 1. A history of physical abuse was present in 32.8% of the entire population. There was a higher incidence of abuse in the boys (36.5%) than in the girls (22.0%), but this difference is not significant at the 5% level. Similar data has not been reported in the literature for comparison. However, Sears et al[17] reported that only 7% of the parents of 5-year-old children in a normal population used frequent and severe spankings as a major technique of controlling their children.

The relationship between previous physical abuse and self-mutilation in the schizophrenic children while in treatment after the age of 6 is depicted in Table 2. Self-mutilation in the boys was significantly related to a prior history of physical abuse ($P = 0.02$). A similar relationship between prior abuse and self-mutilation was not significant at a 5% level in the girls group. While the true significance of this relationship is difficult to assess due to the small number of girls who were physically abused, the results were in the expected direction ($P = 0.11$), and every girl who had been abused proceeded to develop self-mutilation.

The establishment of physical abuse as a frequent precursor to self-mutilation made it necessary to investigate the relationship of physical abuse to infantile headbanging which had already been shown to be a precursor to self-mutilation in these same children in the previous study. It was possible that the relationship between physical abuse and self-mutilation reflected their common link to headbanging. However, no significant relationship could be found between infantile headbanging and physical abuse in either the boys or the girls group as shown in Table 3. ($P > 0.05$). Therefore, the headbanging and abuse can be regarded as separate and distinct factors influencing self-mutilation.

The higher incidence of physical abuse in the histories of these schizophrenic children, as compared to normal children may be attributed to specific factors present in both the children and their parents. The hyperactivity and destructiveness which is often superimposed upon the basic deviancy of these children may provoke intense anger and frustration in the parents culminating in their use of physical abuse. The psychological vulnerability of these parents, many of whom are psychotic,[18] further increases the possibility of their losing control of aggressive impulses.

The significant relationship established between current self-mutilation and a prior history of physical abuse among the boys confirms the hypothesis that these early traumata become precursors to subsequent self-mutilation. Amongst the girls, physical abuse proved statistically to be of lesser significance as a precursor to self-mutilation

Table 1.—*Previous History of Physical Abuse in Schizophrenic Children*

	Physical Abuse			
	Present	Absent	Total	Percent
Boys	19	33	52	36.5%
Girls	4	14	18	22.0%
Total	23	47	70	32.8%
		$X^2=1.24$	$P>0.05$	

Table 2.—*Self-Mutilation (SM) and Previous History of Physical Abuse in Schizophrenic Children*

	Physical Abuse		
	Present	Absent	Total
Boys			
SM	10	7	17
NO-SM	9	26	35
	19	33	52
	$X^2=5.41$		$P=0.02$
Girls			
SM	4	7	11
NO-SM	0	7	7
	4	14	18
	$P=0.11$ (Fisher Exact Probability)		

Table 3.—*Infantile Headbanging and Previous History of Physical Abuse in Schizophrenic Children*

	Physical Abuse		
	Present	Absent	Total
Boys			
Headbanging	6	7	13
No headbanging	13	26	39
	19	33	52
	$X^2=0.93$		$P>0.05$
Girls			
Headbanging	3	5	10
No headbanging	1	9	8
	4	14	18
	$X^2=1.9$		$P>0.05$

than infantile headbanging (as determined by the previous investigation). However, each abused girl developed self-mutilation. A larger group of schizophrenic girls needs to be studied in order to ascertain the significance and relative importance of these early traumatic precursors in their subsequent development of self-mutilation. The specific linkage between physical abuse and subsequent self-mutilation becomes more apparent after one examines the case histories in some detail. Several important features emerge in the relationship between the abusive parent and the child. Primary is the parent's rejection of the child with implied

or overt threats of abandonment. These parents often alternate the physical beatings with periods of withdrawal and understimulation. A vicious cycle occurs in which physical abuse increases the child's aberrant behavior which in turn, provokes the parent into further violence. One can speculate that the abused child's tendency to repeat this painful experience is reinforced by the accompanying tactile and kinesthetic simulation which cannot be secured during the intervening parental detachment. (The role of kinesthetic stimulation involving skin contact has been described by Gerwirtz[19] as the most potent positive reinforcer for childhood behavior. He also stresses that this type of reinforcing stimulus may be made more effective by its previous absence as in deprivation.) The parent's exclusive involvement with the child during the infliction of pain may not only reinforce the child's quest for physical punishment, but also might become the prototype for the subsequent self-infliction of pain. The child might "hurt himself" mainly to re-experience the pleasurable elements of the parental attacks in the absence of any parental contact. The child identifies simultaneously with the punitive parent and with himself as the victim, as he re-enacts the original trauma.

Review of the cases in which physical abuse was present also revealed that the mothers were the most frequent source of abuse. This is consistent with the observations of Simons et al[6] who found that mothers were responsible for most of the cases of child abuse reported in New York city. The mothers of our abused schizophrenic children shared many pathological personality traits and childhood experiences in common. They had frequently experienced severe deprivation and excessive physical punishment at the hands of their own parents. They frequently felt betrayed by their inadequate husbands when marriage failed to satisfy their longings for infantile gratification. They often endowed the child with their own feelings of worthlessness and self-deprecation and proceeded to re-enact the same cruel pattern of rejection and abuse. The following case histories will illustrate certain aspects of the pathological interaction between these deviant psychotic children and their psychologically vulnerable parents which resulted in maternal insufficiency, rejection, and abuse.

Report of Cases

CASE 1.—Gordon was referred to the center at the age of 7 for hyperactivity, destructiveness, running away, and ritualistic, compulsive behavior. His developmental history revealed an early feeding problem which resulted in recurrent vomiting from birth to 1½ years. Motor development was normal except for some difficulty in coordination. Gordon developed multiple fears, started to soil, manifested severe temper tantrums and a tendency to withdraw shortly before the birth of a sibling when he was 4. He also developed eczema and food allergies at this time. Both parents were brutal to Gordon since infancy when he failed to respond to their directives. They dealt with his feeding problems with physical beatings which were often accompanied by food deprivation and threats of abandonment. The beatings only increased Gordon's ritualistic behavior which was regarded as deliberate provocation by the parents. They perpetuated the vicious cycle by administering additional beatings. Gordon manifested self-destructive behavior in the form of biting his hands, banging his head, and throwing himself on the floor when frustrated. During a visit home, he enacted a "suicide" scene by pretending to lie dead on his mother's carving knife. Gordon's mother had experienced a deprived childhood and was prematurely burdened with household responsibilities and the care of younger siblings. Her feelings of deprivation were intensified by the chronic vocational and social inadequacy of her husband who had frustrated her fantasies of infantile gratification, forcing her into an undesired maternal role towards him.

CASE 2.—Laura was referred to the center at the age of 8½ because of bizarre behavior which included autistic withdrawal, excessive mouthing of objects, inappropriate giggling, regression in toilet habits, and frequent temper tantrums. This behavior caused her expulsion from school. The mother's pregnancy with Laura was unplanned and unwanted as it interfered with her teaching career. She exhibited severe nausea and vomiting throughout the pregnancy. The birth was uneventful, and the developmental history seemed within normal limits except for a slightly delayed onset of speech. The mother, an aloof, intellectualized woman, demonstrated marked ambivalence towards the care of Laura and towards her passive, obese husband who failed to satisfy her financial and sexual needs. She beat the child

frequently during the first year and reacted to her angrily if she fell. The mother often stepped on her if she was on the floor. These punitive interventions alternated with periods of neglect. The mother finally resumed her career when Laura was 14 months old and left her in the care of a nurse. Her difficulties in caring for Laura were related to her own feelings of childhood deprivation at the hands of a domineering and overly controlling mother who quarrelled constantly with her father and her. In addition, she had been prematurely burdened with the care of a younger sister who had been crippled since the age of 2 from poliomyelitis. Laura displayed a great deal of regressive behavior at the center in the form of catatonic withdrawal, excessive masturbation, fecal smearing, and attacks of panic. She also manifested self-destructive behavior consisting of hair pulling, kicking herself, sticking herself with sharp objects, and hitting herself while calling herself a bad girl. She also exhibited nocturnal headbanging and talked about suicide.

In some of the cases, the maternal hostility and rejection was already apparent during pregnancy and in the neonatal period. It was manifested in the form of attempted abortion and subsequent physical attack upon the infant which continued during the first years of life. Some mothers projected their rage onto the newborn, interpreting difficulties in feeding or sleeping as signs of the baby's rejection of them. Then they utilized the projection as a rationalization for their subsequent rejection and abuse of the child. Many of the abusive mothers displayed periodic episodes of depression and withdrawal which were often first manifested as postpartum depressions. These served to immobilize these mothers and thus protect the child from their pent-up rage.

CASE 3.—Marcia was referred to the center at the age of 7½ because of disruptive behavior in her foster home and at school which consisted of aggressivity, temper tantrums, hyperactivity, and compulsive, inappropriate talking. Marcia's birth was unplanned. The mother became angry and depressed when she learned of the pregnancy. After an unsuccessful abortion attempt with medication, she threatened suicide and demanded to be sterilized following the delivery. Although Marcia was an 8-month baby who developed cyanosis postnatally, her developmental history was normal. The mother was abusive towards Marcia during her infancy. She would discipline her by slapping her on the face with a wet towel. She finally placed Marcia in a foster home at the age of 19 months together with two older brothers who have been diagnosed as schizophrenic and mental defective, respectively. Marcia's father, who had been frequently jailed, was diagnosed as a psychopath. The parents commonly attacked one another physically. They both came from disorganized homes in which they had been beaten by their fathers. Marcia demonstrated temper tantrums at the center during which she bit herself, pulled her hair, knocked herself on the floor, and hit her head. She first manifested headbanging at the age of 2 while in a foster home. She also threatened suicide.

CASE 4.—Ralph was 7½ when referred to the center because of impulsive, destructive behavior in school and at home. He did not learn in school because of his distractibility and hyperactivity. He manifested severe hostility towards his younger brother at home. The pregnancy with Ralph was unplanned and unwanted by his mother. Developmental landmarks were within normal limits, however, his mother subjected him to severe physical punishment and rejection which began in the first month of life. She forced fed him by spoon from the ages of 1 to 3 months and would beat him if he refused. She confined him to the playpen up to the age of 18 months because he was difficult to manage otherwise. She began to toilet train him at 18 months by means of strappings and beatings. An early cycle was constructed which consisted of beatings by the mother, defiance and provocation by Ralph, which led to further beatings by the mother, etc. Ralph's behavior deteriorated to a greater degree when he was 5 after the birth of his brother. Since that time, his father also became physically abusive towards him. His mother never hugged or kissed him, nor did she feel affection for him. The mother's own childhood was the scene of violent quarrels between her parents. She suffered severe whippings at the hands of her father, whom she preferred, nevertheless, to her nagging, screaming mother. Her mother often slept with her for protection against the father. She witnessed parental intercourse frequently during this time. Her father also had a history of deprivation and suffered physical abuse at the hands of his father, who whipped him up to the age of 13. Ralph was extremely provocative at the center and often precipitated situations in which he was hurt. He was preoccupied with violence and loss of control. He spoke of himself as "being in ten pieces" indicating a wish to be pulled together. A recurrent theme in the playroom was a mother smashing all the furniture in the house after it had been arranged by the father.

CASE 5.—Myron was referred to the center at the age of 6 for hyperactivity, withdrawal,

stereotyped movements, and atypical extensor spasms. The pregnancy with Myron was planned by his mother without his father's knowledge in her attempt to save the marriage which had been deteriorating. Myron had a normal developmental history. However, he was subjected to violent physical attacks by his psychotic mother during her frequent, periodic outbursts. These attacks were initially manifested in the first year of life and were related to all aspects of maternal care. She forced fed Myron in a brutal manner and began to beat him during her unsuccessful attempt at premature toilet training at 5 months. After Myron became a year old, a pattern of guilty overprotection, seduction, and overstimulation began to alternate with the rejection and physical abuse. The mother admits to beating Myron until he was "black and blue." She came from a deprived background and suffered beatings at the hands of her father who allegedly had a violent temper. Myron displayed self-destructive behavior during tantrums at the center in which he would bang his head, bite himself, or pound his hands against the wall. He also manifested accident proneness. The staff members at the center were impressed by the mother's tendency to project her angry feelings onto Myron and her good feelings onto his younger brother who was obviously her favorite. This enabled the latter to escape the abuse which was concentrated on Myron.

In another group of cases, the parental abuse occurred later and was often a reaction to a defect in the child. These children often manifested early disorders in feeding, arousal, motor development, and speech on the basis of cerebral dysfunction or medical illness. Although rejection of the child was frequently present at birth, the actual abuse did not become manifest until the illness or deviancy of the child imposed an intolerable burden on the parents relative to their adaptive competency.

CASE 6.—Roy was referred to the center at the age of 6 for rebelliousness, temper tantrums, reversion to infantile patterns, and because of his mother's fear of physically harming him. Roy was the firstborn of twins. The birth was premature, and he suffered postnatal apnea and cyanosis. His mother reacted to the unexpected birth of the twins with depression and withdrawal, refusing to see them for the first two days. Roy immediately manifested difficulty in sucking with frequent regurgitation. He subsequently displayed delayed motor development with poor coordination and speech difficulties. Neurological examination revealed the presence of minimal brain damage. Roy was also subjected to surgical procedures during the first months of life including urethral meatotomy and a hernia repair. He then developed celiac disease at the age of 20 months. Roy's slow, deviant development, together with the persistent diarrhea accompanying the celiac disease and the need for surgical correction of inborn defects, intensified the mother's rage. She began to beat him uncontrollably at the onset of the diarrhea. These repeated beatings and her fear of losing control led her to seek treatment. The mother's background is one of deprivation and abandonment. She was the youngest of five siblings. Her aggressive, domineering mother devoted most of her care to two older siblings who had chronic illnesses. The children were placed in a foster home at early ages when she developed tuberculosis. Her father died when she was 11. At the center, Roy was preoccupied with violence and the fear of physical harm. He showed extreme rivalry with his peers for the attention of adults. He attacked the other children for their own weaknesses and defects much as his mother had attacked him. His play depicted repetitive, violent scenes in which a woman defeats a man and a boy in combat.

Not all of the abused children developed self-mutilation. Nine of the 19 abused boys failed to manifest self-mutilation prior to or during their residence at the center. Were the effects of the physical abuse manifested differently in these children? Review of their case histories revealed the presence of pain-dependent behavior distinct from self-mutilation in seven of these nine children. This behavior was characterized by extreme teasing and provocativeness which often led to beatings and attacks by adults and peers similar to those previously administered by the punitive parent. This pain-dependent provocativeness was often accompanied by accident proneness and suicidal ideation.

CASE 7.—Stanley was referred to the center at the age of 7 for hyperactivity, violent temper tantrums, poor speech with perseveration, tics, multiple phobias, and extreme provocativeness. His mother acknowledged feelings of depression for several weeks following Stanley's birth. His developmental history was marked by retardation in speech and motor development and early feeding difficulties. Stanley was subjected to repeated early separations from his mother from ages 1 through 6 during the latter's nine hospitalizations for gynecological procedures and for a seizure disorder of possible psychogenic origin. At the age of 20 months, he manifested anxious, clinging behavior after his sister was born. This alternated with provocative, impulsive behavior. His mother responded to him inconsistently, at times

being overly stimulating and seductive, and on other occasions resorting to physical punishment. This was accompanied by obsessional preoccupation with Stanley's becoming physically ill or injured. His father responded to Stanley almost exclusively with physical punishment which often resulted in bruises. Stanley often acknowledges feelings of pleasure and triumph after successfully provoking a beating from his father. He relates in a provocative manner at the center. He exhibits tantrums in which he strikes out at adults by kicking, biting, and spitting. This is paired with verbal tirades in which he invites punishment. He is constantly preoccupied with fears of being injured or killed which are often paranoid in nature. At the same time, he often wishes that he or his parents would die. He has not exhibited self-mutilation.

However, the same type of provocative behavior was present in eight out of ten abused boys who displayed self-mutilation and was much less frequently observed in children with no history of physical abuse. This suggests that the pain-dependent behavior in general might be a more widespread sequel to physical abuse than self-mutilation. Since the presence or absence of pain-dependent provocativeness has been inconclusively documented in a few of these cases, its suggested link with physical abuse must remain hypothetical. Clinically, this self-destructive adaptation in which the child controls the administration of pain from external sources can be regarded as an indirect, more highly structured counterpart of direct self-mutilation. It is not unlike the "masochistic" behavior in cats and dogs who are trained to seek out painful stimuli providing that they are associated with food, water, release from restraint, sexual gratification, or some other biological reward.[20] Thus, the physical abuse provoked from the parent may be welcomed if it is associated with the reward of parental attention and care, especially if the alternative is isolation and stimulus deprivation. A related phenomenon may be observed in the self-destructive behavior of psychotic and "borderline" adults who mutilate themselves in order to provide stimulation to ward off an impending state of depersonalization.

Case Illustrations.—"A young female student habitually drove lighted cigarettes into the palms of her hands to alleviate the more painful feelings of isolation and depression."

These individuals also seek out high tension anxiety-laden situations providing "psychic pain" in order to achieve similar relief from feelings of isolation and depersonalization.

The accident proneness frequently observed in the abused children seems to lie midway between direct self-mutilation and the pain-dependent provocativeness just referred to. These children provoke injury and physical pain from the nonhuman environment rather than from another person and are usually rewarded for their efforts by obtaining physical care from the parent which is usually not spontaneously forthcoming. This parental response tends to reinforce and perpetrate the accident-proneness.

CASE 8.—Charlotte was referred to the center at age 8 because of hyperactivity, aggressive, destructive behavior, nocturnal headbanging, and a tendency to subject herself to dangerous and painful situations which often resulted in accidents. Charlotte and her twin sister were subjected to severe neglect and emotional deprivation at the hands of their disorganized, psychotic mother, which alternated with severe physical punishment. Charlotte's father was a passive, marginally functioning man who, while frequently unemployed, remained at home to take over mothering functions. Charlotte had been hospitalized with her twin at the age of 8 months for dehydration and again at 2 years for malnutrition. Her twin sister died shortly thereafter of a ruptured spleen after having been kicked by an older brother. The mother decompensated and had to be hospitalized following this episode. Charlotte's developmental history was within normal limits. However, she became a persistent headbanger since the age of 6 months. At the age of 2½ she began to pull her hair out and eat it. At this time, she fractured her elbow during a fall and regressed from walking to creeping for 3 months thereafter. The remainder of her early childhood was marred by frequent cuts and bruises suffered in falls and other accidents which often required treatment at the emergency rooms of local hospitals. At the center, she suffered frequent cuts and bruises which often followed impulsive behavior. She deliberately exposed herself to dangerous situations without manifesting appropriate fear. Charlotte also was aggressive towards peers and adults. She demonstrated direct self-mutilation in the form of headbanging and frequently threatened suicide. Her mother's background was similar to her own in terms of physical and emotional deprivation with an absent father and a mother who died in a mental institution when she was 13.

Whereas accident proneness has usually been explained on the basis of unconscious guilt emanating from a punitive superego, some observers have noted its relation to previous painful situations. Sears linked accident proneness to prior physical punishment while Frank[21] noted

that inadequate maternal care and the occurrence of accidental injuries in very early childhood could influence the later development of accident proneness.

Comment

The data and case histories, therefore, suggest that early physical abuse might enhance the development of pain-dependent behavior in general. This would enable us to extend our original hypothesis which was limited to the effect of early physical abuse on self-mutilation proper. We can now speculate on the sequence of events linking early physical abuse and subsequent pain-dependent phenomena. As previously described, the periodic physical abuse occurs in a matrix of overall rejection and stimulus deprivation. This physically abusive contact, although painful to the child, may compensate for the deficiency of tactile and kinesthetic stimulation. The painful component of the physical abuse is subordinated to the greater pleasure involved in the satisfaction of cravings for physical contact. The tactile and kinesthetic gratification acts as a potent reinforcer for repetition of the child's pain-seeking behavior. The child may substitute self-attack if his provocative behavior fails to elicit parental abuse, and his cravings for physical contact are not satisfied by more appropriate means. The same child who utilizes self-mutilation as a direct means of repeating the abusive pattern may use provocativeness and accident proneness as indirect methods for eliciting similar painful gratification. Since all these varieties of pain-dependent behavior, including self-mutilation, possess an adaptive function, they are likely to be repeated as long as the basic needs for tactile stimulation and body contact are not satisfied more appropriately. These self-destructive sequelae of physical abuse are initially learned behavior patterns which are perpetuated by the pleasure of need satisfaction and by environmental reinforcement. They are preconflictual and precede the differentiation of psychic structure and the presence of guilt and superego formation. However, they may become subsequently utilized in conflict solution with the maturation of superego functioning gradually becoming "masochistic" in character. The provocativeness and accident proneness are utilized more frequently as a means of self-punishment to satisfy superego pressure. All of these pain-dependent mechanisms manifested by the schizophrenic children are facilitated by their global ego defects, especially those relating to the perception and integration of painful stimuli[22] to the management of aggressive impulses, and to the differentiation of the self from the external world. The fact that the painful stimulation takes place during the first two years of life prior to the completion of ego differentiation may contribute to the confusion regarding the source of the attack (whether it is self or externally inflicted). This is often observed clinically during episodes of self-mutilation in which the child accuses the nearest person of the self-destructive act.

The results of this investigation which demonstrate early physical abuse as a precursor to subsequent self-destructive behavior in schizophrenic children are complementary to the previous study which revealed infantile headbanging to play a similar role. In both cases, the early trauma (whether self or externally induced) occurs in a background of stimulus deprivation and is reinforced by environmental responses. The painful behavior is strengthened by its early adaptive nature based on its association with human contact which is otherwise lacking. The child learns to repeat this painful stimulus according to the laws of operant conditioning, and it gradually becomes an integral part of his behavioral repertoire. One may speculate regarding the ultimate fate of the self-destructive behavior in these children as they proceed towards adolescence and adulthood. Does it emerge later as chronic masochistic behavior or as suicide? One of the abused schizophrenic girls (case 3) who is presently a teen-ager was recently hospitalized following a serious suicide attempt. Schrut[23] observed that many older children and adolescents who attempted suicide had manifested earlier patterns of self-mutilation. This underscores the need to modify the earliest patterns of self-destructive behavior before they become permanently rooted in the personality.

It would be illuminating to investigate the incidence of self-destructive behavior in nonschizophrenic children who have experienced similar types of early painful stimula-

tion. Documented cases of child abuse in the general population and cases of chronic headbangers would provide fruitful material for such an exploration. One may hypothesize that physically abused infants and young children with more intact ego functioning who do not subsequently manifest schizophrenic symptoms would react to such trauma with a lower incidence and altered quality of self-destructive behavior later in childhood. They could externalize aggressive impulses more effectively through socially acceptable channels of play, competitive pursuits, and physical activities by virtue of the greater adaptive capacity of their ego and their better differentiated ego boundaries. In addition, the greater resiliency of their ego defenses would permit more successful control of potentially disruptive aggression through neurotic symptom formation (obsessional, phobic, and paranoid symptoms). When these children do express self-destructive behavior, it is likely that a greater percentage of it will be manifested more covertly as highly structured pain-dependent behavior and as depressive symptoms with low self-regard, rather than in the form of overt self-mutilation.

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